



Request for Sites to Host Demonstrations/ Evaluations of Innovative Technologies for Hazardous Waste Cleanup

Issue Date: December 4, 2000

Due Date: January 21, 2001

The following is a solicitation issued by the Superfund Innovative Technology Evaluation (SITE) program. The objective of the solicitation is to identify hazardous waste sites that are available to host and are in need of full scale demonstrations of innovative treatment technologies. This solicitation should be of interest to private firms and government agencies that have financial or regulatory responsibility for on-site hazardous waste remediation.

1. Introduction.

The U.S. Environmental Protection Agency established the SITE Program to help promote the use of innovative remediation and field measurement technologies at hazardous waste sites. SITE offers a mechanism where the performance and the costs of innovative technologies can be demonstrated and evaluated by an independent third party at a particular hazardous waste site. These demonstration projects allow participation of private entities, state environmental agencies and other federal agencies such as the Department of Energy (DOE) and the Department of Defense (DoD). The SITE program is responsible for preliminary treatability studies, test plan preparation, sampling, sample and data analysis, and for the reporting of the demonstration results. The program does not give financial support to sites or technology vendors.

The strategy of the SITE program is to conduct thorough on-site evaluations of innovative technologies which show promise in providing more effective remediation of the subject site. It is envisioned that the result of a SITE demonstration will be three fold: 1) the site owner or other decision maker will be able to make a more informed choice on the clean up technology to use for larger scale work, 2) technology vendors and/or developers will have gained credible data and much needed exposure for their process and 3) the environmental community at large will gain a better understanding of the capabilities and costs of new and promising technologies.

This solicitation is directed toward those that have the challenge and responsibility for site clean up: site owners,

EPA Remedial Project Managers (RPMs) or On Scene Coordinators (OSCs), site managers from state agencies, or other site representatives. It is not directed primarily toward the technology vendor. However, it is anticipated that other solicitations will go out which are more focused on finding appropriate technologies for specific sites that have been selected through this current solicitation.

2. The Application Process

The application process contains two distinct steps. The first step requires the applicant to complete a short application that concisely describes the site in terms of history; extent and level of contamination; regulatory issues; and logistical factors. These applications will then be screened for further consideration. The second step involves a more intensive review of the site to determine whether a technology evaluation should be performed. Final selection is made after the second step.

To initiate the screening step, applicants will complete and send in the attached form. These applications shall be no more than 2 to 5 pages, with 5 pages being the maximum that will be considered. Although it is relatively short, it is essential that the form be filled out completely and clearly as it will be used to determine whether the application will be given consideration past this first step.

The applications will be evaluated by a review board consisting of representatives from EPA and other state and Federal agencies. To aid the initial screening process, the applicant is urged to be clear and concise. At this point in the selection process, the information presented in the application should not be exhaustive. The application should be straightforward and logically presented without excessive detail. A reviewer should be able to go through the application in a reasonable amount of time and be able to grasp the magnitude of the contamination problem and judge whether there is potential for a worthwhile demonstration at the site.

After this initial screening process, all applicants will be notified. If the application is judged to merit further consideration, then the SITE program will contact the applicant to begin a more intensive dialogue with the applicant. A more comprehensive review of the type and extent of contamination, the schedule and technological challenges of remediation, and the regulatory and legal concerns will be carried out at that time. The goal of the second step is to work with the applicant and other involved parties in order to reach a consensus on whether a demonstration of a technology (or technologies) is feasible and worthwhile.

The attached form can also be downloaded from the SITE

program web site (<http://www.epa.gov/ORD/SITE>), or it can simply be retyped.

The completed form can be mailed to the following address:

Mr. Randy A. Parker
U.S. Environmental Protection Agency (MS 481)
26 West Martin Luther King Drive
Cincinnati, OH 45268

Alternatively applications can be E-mailed to parker.randy@epa.gov

Questions regarding this solicitation should be directed to

Vince Gallardo (513)569-7176 or
Randy A. Parker (513)569-7271

3. Selection of Technologies to be Demonstrated.

Applicants may apply to the program with or without a specific technology in mind for demonstration. If a technology is specified in the application, applicants should be able to defend their selection of the technology. If no technology is specified, and the application is accepted, then the SITE program will work with the applicant in determining the most suitable technologies to be demonstrated at the site. On occasion, additional solicitations will be issued that seek technologies that would be appropriate for the sites that have been selected.

Traditionally, SITE has conducted full-scale or large pilot-scale demonstrations and has not evaluated technologies which were of a smaller scale. This approach allowed realistic cost and performance data to be collected that would be helpful to those making decisions for selecting full scale remediation systems. However, experience has shown that a well carried out treatability study is often necessary prior to the actual demonstration. In the past treatability studies have been the financial responsibility of the technology vendor or the site. However, SITE now plans to be responsible for designing and carrying out treatability studies when deemed necessary. No funds will be exchanged between the EPA and the site representative or technology vendor, but the SITE program will prepare the treatability study plan and provide for the personnel, facilities, and other resources for the associated sampling and analysis.

4. Responsibilities of Participants.

Aside from providing input into the planning and implementing of the demonstration project, project participants also have specific responsibilities which are summarized below. A much more detailed description of responsibilities can be found at <http://www.epa.gov/ORD/SITE>.

Site Owner/Representative. Responsible for ensuring

logistical support to prepare the site for demonstration. Examples, not inclusive, are as follows: utilities, excavation, disposal of wastes generated during the technology demonstration, paving for access to the demonstration location, and site security. Experience has also shown that technology vendors often need assistance from the site representatives in paying for the expenses incurred before, during or after the demonstration. **SITE does not provide funding to technology vendors for demonstrations.**

US EPA SITE Program. Responsible for the test plan preparation, analytical costs associated with treatability studies, sampling and analysis during the demonstration, and the writing, publishing and dissemination of the evaluation report.

Technology vendor or developer. Although the technology vendors are not expected to be applicants of this solicitation since it is directed primarily to site representatives, they do serve a crucial role by providing the technology for testing. If vendors are in need of financial assistance, they are encouraged to work out an agreement with site representatives to help with the costs. On numerous occasions this approach has been mutually beneficial.

5. Sites and Contaminants of Interest.

The SITE program has an interest in receiving responses from any site that has a specific site problem that requires clean-up. **The SITE Program has particular interest in evaluating in-situ and lower cost technologies.** The Priority areas for the SITE Program are listed in the following table.

Priority Areas	
Sites	Brownfields Superfund Sites with acid mine drainage Manufactured gas plants Pesticide manufacturing/formulators

*Soil/Groundwater contaminated with any or all of the following:

- " DNAPL/chlorinated solvents
- " PCBs
- " Arsenic, mercury or other heavy metals

Sediments** contaminated with any or all of the following:

- " Pesticides
- " PCBs
- " PAHs
- " Arsenic, mercury or other heavy metals

*especially fractured bedrock and karst formations

**In situ, ex situ, or in confined disposal facilities (CDFs)

Technologies such as data management systems, thermal

destruction systems, and solidification are of lower priority to the program. Sites contaminated primarily with petroleum related compounds are also of low interest.

Application Form for SITE Demonstrations

Although all questions are important and should be concisely addressed, experience has shown that accurate information in the areas of site characterization and site logistics are critical to the reviewers understanding the problems and challenges at the site. **If the site is not well characterized it will likely score very low.**

Applicant name:

Applicant address:

Phone and fax numbers:

Email:

Site name and location:

1) Site Background.

Describe history of the site including location, summary of ownership, how contamination occurred and remediation to date.

2) Site Characterization

Describe the site in terms of contaminant and hydrogeologic characterization. Give a concise summary of the results from site characterization work including: concentrations of contaminants including range and average; vertical and horizontal extent of contamination; brief description of relevant subsurface formations. For sites with impacted groundwater, please indicate whether DNAPL is a concern and if so, the extent of the problem.

3) Site Logistics

Describe logistic features of the site that may affect, either negatively or positively, the progress of a technology evaluation. One feature that has proved to be important is the availability of funding to help pay for vendor's costs. Other important logistical features will include things such as availability of utilities, accessibility, and schedule of site related activities (e.g., site investigations, clean up schedules, pending sales of property.)

4) Regulatory History of the Site.

Briefly summarize the following: clean up goals; risk assessment findings; remediation plans and deadlines; state/federal regulatory involvement.

5) Technology Description.

If the applicant is considering a specific innovative technology for a SITE demonstration, then please give a brief description. Include size of technology, summary of relevant performance data, availability of technology, capabilities and limitations of technologies. It is also important to discuss briefly the advantages, disadvantages or challenges in implementing the technology. Lastly, please include the amount of treatability study work needed, if any. (Please note that the applicant need not submit a technology for consideration in this application)

6)Anticipated benefits.

Please describe how the applicant hopes to benefit from a technology evaluation conducted by the SITE program and why the site would be a good candidate for such an evaluation.